

[Document Type] Abstract

[Title of the Invention] METHOD OF EVALUATING CONTINUOUS BEAM,
PROGRAM OF EVALUATING CONTINUOUS BEAM, AND METHOD OF
EVALUATING COMPOSITE BEAM

A method of evaluating a continuous beam includes a solution determination step of obtaining a plurality of bending moments at intermediate fulcrums and a pair of end fulcrums and a plurality of rotation angles at the pair of end fulcrums based on given conditions. The given conditions include a length and a bending stiffness of each of n beams, a plurality of rotational rigidities at the intermediate fulcrums and the pair of end fulcrums, a vertical load acting on the n beams, and a plurality of vertical displacements at the intermediate fulcrums and the pair of end fulcrums. In a case where the plurality of bending moments and the plurality of rotation angles are defined as a plurality of unknown quantities and a relational expression between the plurality of rotational rigidities, the plurality of bending moments, and the plurality of rotation angles and a relational expression between the plurality of vertical displacements are defined as a plurality of first boundary conditions having the same number as the number of the plurality of unknown quantities, in the solution determination step, the bending moments and a deflection distribution of the continuous beam are evaluated by solving the plurality of unknown quantities such that the plurality of unknown quantities satisfy the plurality of first boundary conditions.

FIG. 10